

PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

**Canam Steel Corporation
2341 South 30th Street
Lafayette, Indiana 47905**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 157-16099-00035	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:

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Certification
Quarterly Report

SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary fabricated steel joist and joist girder manufacturing plant.

Responsible Official:	Ronald W. Peppe II
Source Address:	2341 South 30 th Street, Lafayette, IN 47905
Mailing Address:	P.O. Box 5057, Lafayette, IN 47903
General Source Phone Number:	(765) 477-7764
SIC Code:	3441
County Location:	Tippecanoe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source under PSD; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

- (a) A paint dip tank unit, identified as DTU, consisting of a dip tank constructed in 1984 and two (2) dip tanks constructed in 1974, with a total maximum capacity of 24,816 pounds of steel per hour, and exhausting within the building.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [40CFR 124]

Pursuant to 40 CFR 124.15, 40 CFR 124.19, and 40 CFR 124.20, the effective date of this permit will be thirty-three (33) days after issuance.

B.3 Revocation of Permits [326 IAC 2-2-8]

Pursuant to 326 IAC 2-2-8(a)(1), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of eighteen (18) months or more.

B.4 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (e) In the event that the Part 70 application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:
 - (1) If the Part 70 draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Part 70 draft.
 - (2) If the Part 70 permit has gone through final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go through a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Part 70 permit at the time of issuance.
 - (3) If the Part 70 permit has gone through public notice, but has not gone through final EPA review and would be issued after the Significant Source Modification is

issued, then the Modification would be added to the proposed Part 70 permit, and the Title V permit will issued after EPA review.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (a) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as

they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

Compliance Requirements [326 IAC 2-1.1-11]

C.7 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.9 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.10 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

C.11 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]

-
- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
 - (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
 - (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.12 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.13 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

A dip tank unit, identified as DTU, consisting of a dip tank constructed in 1984 and two (2) dip tanks constructed in 1974, with a total maximum capacity of 24,816 pounds of steel per hour, and exhausting within the building.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-5]

The condition note from Operation Permit OP 79-04-93-0440, issued December 19, 1989, that VOC emissions are subject to 326 IAC 8 but that there are no limits in this rule applicable to this facility, has been determined to be invalid, because the paint dip tank unit DTU is subject to the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations).

- (a) The source has submitted a site specific RACT plan, pursuant to 326 IAC 8-1-5. The RACT has been determined to be as follows:
 - (1) The VOC content of the dip tank unit (DTU) shall not exceed 3.9 pounds of VOC per gallon of coating, excluding water, between April 1 through October 31.
 - (2) The VOC content of the dip tank unit (DTU) shall not exceed 4.3 pounds of VOC per gallon of coating, excluding water, between November 1 through March 31.

Compliance with these limits shall serve as an alternative to satisfy compliance with 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations).

D.1.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

This Dip Tank Unit (DTU) shall use less than two hundred fifty (250) tons of VOC, including coatings, dilution solvents, and cleaning solvents, per consecutive twelve (12) month period. This usage limit is required to limit the potential to emit of VOC to less than two hundred fifty (250) tons per consecutive twelve (12) month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.4 Volatile Organic Compounds (VOC)

- (a) Compliance with the usage limitation contained in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) using formulation data supplied by the coating manufacturer.
- (b) Compliance with the VOC content limit contained in Condition D.1.1 shall be determined based on:
 - (1) a monthly volume-weighted average of all coatings applied in the dip tank unit (DTU), including solvents and thinners; and

- (2) record keeping as listed under D.1.6(b)

If monthly records sufficient to determine an accurate monthly weighted average are not available, then an alternative compliance method can be used if approved by the OAQ to confirm compliance with the limits.

OR

- (3) pursuant to 326 IAC 8-1-4(a)(3) using formulation data supplied by the manufacturer and calculated on an "as applied" basis; and
- (4) record keeping as listed under D.1.6(a).

D.1.5 VOC Emissions

Compliance with Condition D.1.2 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the twelve (12) month period.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.6 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, D.1.2, and D.1.4, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.1.1 and D.1.2

- (1) The amount and VOC content of each coating material (including solvents and thinners) used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
- (2) The volume weighted VOC content of the coatings used for each month (as applied);
- (3) The cleanup solvent usage for each month;
- (4) The total VOC usage for each month; and
- (5) The weight of VOCs emitted for each month.

- (b) To document compliance with D.1.1(a), a monthly volume-weighted average of all coatings applied in a coating tank, flow coater, or flow coating line.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Canam Steel Corporation
Source Address: 2341 South 30th Street, Lafayette, Indiana 47905
Mailing Address: P.O. Box 5057, Lafayette, Indiana 47903
Source Modification No.: 157-16099-00035

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

Part 70 Source Modification Quarterly Report

Source Name: Canam Steel Corporation
Source Address: 2341 South 30th Street, Lafayette, Indiana 47905
Mailing Address: P.O. Box 5057, Lafayette, Indiana 47903
Source Modification No.: 157-16099-00035
Facility: Dip Tank Unit DTU
Parameter: Volatile Organic Compounds (VOC)
Limit: Less than two hundred fifty (250) tons per twelve (12) consecutive month period.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Part 70 Significant Source Modification

Source Name:	Canam Steel Corporation
Source Location:	2341 South 30 th Street, Lafayette, Indiana 47905
County:	Tippecanoe
SIC Code:	3441
Operation Permit No.:	T157-7454-00035 (pending)
Significant Source Modification No:	157-16099-00035
Permit Reviewer:	Amy Cook

On August 27, 2002, the Office of Air Quality (OAQ) had a notice published in the Journal and Courier, Lafayette, Indiana, stating that Canam Steel Corporation had applied for a Part 70 Significant Source Modification to operate a dip tank unit (DTU) with a site-specific Reasonably Available Control Technology (RACT). The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On September 12, 2002, OAQ received the comments from the source. If revisions to the permit are required, bolded language shall indicate language that has been added, language with a line through it has been deleted. The Table of Contents has been modified to reflect these changes.

Comment 1:

Draft Permit, Section D.1.4 "Volatile Organic Compounds (VOC)". This section requires that the compliance determination with the VOC content requirement be applicable to the monthly average of coating applied. We believe that the compliance period should be longer than the proposed one month.

The dip coating process is very efficient but it requires the use of large dip tanks. The coating usage for any period is based on a manual measurement of the level of coating in each dip tank. The level of each tank is converted into a volume of paint in inventory at the end of the period by using the dimensions of each tank. The precision of the inventory is limited and the measurement errors that can result from this limitation can affect the average VOC value calculated for any single month.

Also, the VOC content in each dip tank is constantly changing by evaporation of a small portion of the solvent each day. Our VOC usage calculations rely on the assumption that the VOC content in the tanks is relatively constant. The shorter the compliance period is, the higher the error on the calculated VOC content will be.

We think that the optimum compliance period for the VOC content limit is the 12-month rolling average. If the agency prefers a shorter period, a 3-month rolling average should be considered. A 3-month average is a minimum to reduce the impact of the sources of error to an acceptable level.

Response to Comment 1:

IDEM disagrees: IDEM, OAQ, feels that if a monthly average is needed, one month is the least stringent. IDEM, OAQ is currently working with EPA on the dip tank rule 326 IAC 8-1-2(a)10 which allows for monthly volume weighted averaging. In addition, a 12-month rolling average applies to a ton per year

limit. In this case the company has a content limit in which they must comply with the limit or do monthly volume weighted averaging. However IDEM, OAQ, has added additional language to Condition D.1.4 as follows.

Condition D.1.4 - Volatile Organic Compounds (VOC), of the Permit has been revised as follows:

D.1.4 Volatile Organic Compounds (VOC)

- (a) Compliance with the usage limitation contained in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) using formulation data supplied by the coating manufacturer.
- (b) Compliance with the VOC content limit contained in Condition D.1.1 shall be determined based on:
 - (1) a monthly volume-weighted average of all coatings applied in a coating tank, flow coater, or flow coating line; **and**
 - (2) record keeping as listed under D.1.6

If monthly records sufficient to determine an accurate monthly weighted average are not available, then an alternative compliance method can be used if approved by the OAQ to confirm compliance with the limits.

OR

- (3) pursuant to 326 IAC 8-1-4(a)(3) using formulation data supplied by the manufacturer and calculated on an "as applied" basis; **and**
- (4) **record keeping as listed under D.1.6(a).**

Comment 2:

Draft Permit, Section D.1.6 "Record Keeping Requirements". Item (2) requires that we maintain "A log of the dates of use". This requirement should not apply to a large dip coating unit.

The first problem is what is considered the date of use for a material that is added to a tank on October 10 and that will gradually be used. The dimensions of the tanks result in the fact that it takes several months to go through a tank the average volume of coating that it contains.

The second problem is that even if the dates that the coating materials are added to the tanks are recorded, these values can not and will not match the monthly paint usage calculations based on the period ends physical inventories.

We suggest that this requirement be removed from the draft permit unless it can be reworded to be applicable to large dip coating units.

Response to Comment 2:

IDEM agrees: language has been removed from Condition D.1.6 as follows:

Condition D.1.6(2) has been removed and the numbering revised. Condition D.1.6 - Record Keeping Requirements, of the permit has been revised as follows:

D.1.6 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, D.1.2, and D.1.4, the Permittee shall maintain records in accordance with (1) through ~~(6)~~ (5) below. Records maintained for (1) through ~~(6)~~ (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.1.1 and D.1.2
 - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - ~~(2)~~ — A log of the dates of use;
 - ~~(3)~~(2) The volume weighted VOC content of the coatings used for each month (as applied);
 - ~~(4)~~(3) The cleanup solvent usage for each month;
 - ~~(5)~~(4) The total VOC usage for each month; and
 - ~~(6)~~(5) The weight of VOCs emitted for each month.
- (b) To document compliance with D.1.1(a), a monthly volume-weighted average of all coatings applied in a coating tank, flow coater, or flow coating line.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment 3:

Technical Support Document, Section "Enforcement Issue". The draft TSD mentions that "IDEM is aware that the coating used in the dip tank unit (DTU) are not compliance with 326 IAC 8-2-9 [...]".

First, we believe that for the moment the dip tanks could not be considered as being a single emission unit because IDEM has issued no final permit that would confirm this conclusion. We do agree that once the source modification becomes final, the dip tanks should be considered as one unit but in the meantime we do not believe that is the case.

Second, the TSD suggests that our facility is not complying with the applicable VOC rules. We believe that this statement can not at this time be supported with facts that would clearly demonstrate non-compliance. It is our understanding that the TSD should be based on facts and therefore, we believe that the "Enforcement Issue" section should be removed or reworded.

Response to Comment 3:

As per request by Canam Steel Corporation the three (3) dip tanks shall be considered one (1) dip tank unit (DTU). Since the source does not distinguish the dip tank constructed in 1984 from the dip tanks constructed in 1974 in VOC input or coated steel production, the three (3) dip tanks shall be considered one (1) emission unit. All of the rules which are applicable to one of the dip tanks shall be applicable to all of the dip tanks as one (1) emission unit. The most stringent rule of any conflicting rules shall apply to

all of the dip tanks as one (1) emission unit.

A determination that the three (3) dip tanks are one (1) dip tank unit (DTU) does not need to be made after final issuance, it can be made during the initial review of this significant source modification.

Regardless of what has been determined in past permit decisions companies must comply with all applicable rules. During review for this permit it was determined that 326 IAC 8-2-9 (Miscellaneous Metal Coating) is applicable because two (2) dip tanks were constructed in 1974, one (1) dip tank was constructed in 1984, all three (3) dip tanks are now considered one (1) dip tank unit.

At this time the requested Reasonably Available Control Technology (RACT) has not yet been approved by the EPA. The company will be out of compliance if the Volatile Organic Compound (VOC) emissions are greater than 3.5 pounds per gallon of coating, excluding water.

However, no enforcement action is being taken at this time because the source is seeking a RACT, an alternative method of compliance, in lieu of specific 326 IAC 8-2-9 limits.

IDEM, OAQ, does not make any changes to the Technical Support Document for historical purposes.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table Of Contents has been modified to reflect these changes.

1: D.1.4(b)(1) and (2) - language has been revised to clarify intent.

Condition D.1.4(b) - Volatile Organic Compounds (VOC), of the permit has been revised as follows:

D.1.4 Volatile Organic Compounds (VOC)

-
- (a) Compliance with the usage limitation contained in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) using formulation data supplied by the coating manufacturer.
 - (b) Compliance with the VOC content limit contained in Condition D.1.1 shall be determined based on:
 - (1) a monthly volume-weighted average of all coatings applied in ~~a coating tank~~ **the dip tank unit (DTU), including solvents and thinners**; ~~flow coater, or flow coating line~~; and
 - (2) record keeping as listed under D.1.6(b)

If monthly records sufficient to determine an accurate monthly weighted average are not available, then an alternative compliance method can be used if approved by the OAQ to confirm compliance with the limits.

OR

- (3) pursuant to 326 IAC 8-1-4(a)(3) using formulation data supplied by the manufacturer and calculated on an "as applied" basis; and

- (4) record keeping listed under D.1.6(a).

2: D.1.6(a)(1) - language has been added to clarify intent.

Condition D.1.6(a)(1) - Record Keeping Requirements, of the permit has been revised as follows:

D.1.6 Record Keeping Requirements

- (e) To document compliance with Conditions D.1.1, D.1.2, and D.1.4, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.1.1 and D.1.2
- (1) The amount and VOC content of each coating material ~~and solvent~~ **(including solvents and thinners)** used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

**Indiana Department of Environmental Management
Office of Air Quality**

**Technical Support Document (TSD) for a Part 70 Significant Source
Modification.**

Source Background and Description

Source Name:	Canam Steel Corporation
Source Location:	2341 South 30 th Street, Lafayette, IN 47905
County:	Tippecanoe
SIC Code:	3441
Operation Permit No.:	T157-7454-00035
Operation Permit Issuance Date:	Pending
Significant Source Modification No.:	157-16099-00035
Permit Reviewer:	Amy Cook

The Office of Air Quality (OAQ) has reviewed a Reasonably Available Control Technology (RACT) plan from Canam Steel Corporation relating to the following emission unit and pollution control devices:

- (a) A dip tank unit, identified as DTU, consisting of a dip tank constructed in 1984 and two (2) dip tanks constructed in 1974, with a total maximum capacity of 24,816 pounds of steel per hour, and exhausting within the building.

History

On August 25, 1998, Canam Steel Corporation submitted a RACT plan to the OAQ pertaining to their three (3) dip tanks, which have now been determined to be one (1) dip tank unit (DTU). Canam Steel Corporation has a Part 70 permit pending.

Explanation of Modification

Site Specific Reasonably Available Control Technology (RACT) - Canam Steel Corporation proposes to use a higher solvent content coating in the dip coating process. The proposed variance will enable the company to control its emission of VOC from the dip coating process to the minimum level. The proposed variance has been permitted in similar facilities operating the same type of dip coating process.

Description of Operations

The facility fabricates steel joists, joist girders and related products. The process includes storage, cutting, bending, punching, welding and coating of the steel parts and products. The three (3) paint dip tanks (which are considered one (1) emission unit, DTU, as described below under Existing Emission Limitations) are used to apply the coating to the welded products.

Steel joists are dipped in tanks filled with paint. The paint thickness on the coated products depends on the viscosity of the paint. When the VOC content is below the 3.5 pounds of VOC per gallon requirement, too much paint is often applied to the coated products.

When VOC concentration falls below 3.5 pounds per gallon, the dry film thickness of the dipped fabricated steel is sometimes more than 1.5 mil. while the usual customer specification for dry paint thickness is only 1.0 mil. As a result of the lack of control of the paint thickness, too much paint is used by the dip coating process. The excess volume of paint used has two major drawbacks: it is more expensive and it generates higher VOC emissions.

Existing Emission Limits

During the review of the Part 70 permit application, IDEM came to the conclusion that the third installed dip tank would be subject to 326 IAC 8-2-9 since it was built after 1980. The source informed IDEM that it does not distinguish the dip tank constructed in 1984 from the two (2) dip tanks constructed in 1974 in VOC input or coated steel production. Therefore, the three (3) dip tanks shall be considered one (1) emission unit, DTU, and the requirements of 326 IAC 8-2-9 would limit the VOC content of the paint to 3.5 pounds of VOC per gallon of coating.

Proposed RACT

The source's proposal is to control the volatile organic compounds (VOC) emissions from the steel dip coating. The coating presently used is a mix of alkyd primer and mineral spirits. The 3.5 pounds of VOC per gallon of coating content limits results in a higher coating viscosity and ultimately a thicker-than-desired dry paint film on the products.

The 3.5 pounds of VOC per gallon regulation was apparently drafted for spray painting but was made applicable to the dip tank painting process. The source is requesting a site-specific RACT plan that will result in lower VOC emissions.

The source proposes the following to set the VOC content limit:

- (a) the VOC content of the dip tank unit (DTU) shall not exceed 3.9 pounds of VOC per gallon of coating, excluding water, between April 1 through October 31.
- (b) the VOC content of the dip tank unit (DTU) shall not exceed 4.3 pounds of VOC per gallon of coating, excluding water, between November 1 through March 31.

Compliance determination shall be based on a monthly volume-weighted average of all coatings applied in the coating tank, flow coater, or flow coating line. For each coating, thinner, or solvent, the following records shall be maintained:

- (a) monthly usage
- (b) VOC content as supplied by the manufacturer for coatings, thinners, and solvents
- (c) monthly emissions in pounds of VOC
- (d) calculated monthly volume-weighted average VOC content of the coating as applied

If monthly records sufficient to determine an accurate monthly weighted average are not available, then an alternative compliance method can be used if approved by the OAQ to confirm compliance with the limits.

Schedule

The change of VOC content of a dip tank can be done in less than a day by adding paint primer and paint thinner to the dip tank.

Demonstration of RACT

Capital Expenditure and Operating Costs

The petitioned level of control does not require capital expenditures. Therefore, there is no adverse cost impact on the company. The operating cost under the proposed RACT plan would be significantly less than the costs under the VOC content limit specified in 326 IAC 8-2-9.

Energy Requirements

The petitioned level of control does not require more energy than the limit specified in 326 IAC 8-2-9.

Impact of the Environment

The petitioned level of control will not generate any increase in air, water, and solid waste effluent discharge over that generated by following 326 IAC 8-2-9. Under the proposed RACT plan, the dip coating process will emit much less VOC than it would if subject to the 3.5 pounds of VOC per gallon of coating requirement. The petitioned level of control would reduce VOC emissions by adjusting the paint viscosity and allowing for the proper film thickness. Since 1997, at least two similar projects have demonstrated significant VOC emissions reductions at joist fabricating plants located in other U.S. states.

As determined in the attached spreadsheets (appendix A) if the source were to use 3.5 pounds per gallon, based on 326 IAC 8-2-9, the emissions would be 1265.25 tons per year of VOC. By using 3.9 pounds per gallon as proposed in the RACT, the emissions would be 847.47 tons per year of VOC. Therefore, the proposed RACT has less environmental impact than what is in 326 IAC 8-2-9.

Safety Implications

The proposed RACT will not have any adverse impacts on the workers or on product safety.

Additional Information

Experience Learned from Similar Dip Coating Processes

Canam Steel Corporation operates several steel fabricating plants in the USA. In 1996, the Maryland Department of the Environment (MDE) allowed the company a variance to the COMAR 26.19.13C(1) regulation that limits the VOC content to 3.5 pounds per gallon of coating. Between January and December 1997, the monthly results demonstrated that the use of higher solvent content allowed the company to reduce its emissions from dip coating by twenty-eighty percent (28%) while increasing production by seventeen percent (17%).

For the Point of Rocks, MD paint project, MDE drafted a new RACT regulation specific to the dip coating process of fabricated steel. The new VOC content that applied to the dip coating process is 3.9 pounds of VOC per gallon of coating. The Maryland regulation also allowed the company to increase by twenty percent (20%) the VOC content during the winter period defined as November 1 through March 31. The twenty percent (20%) winter increase may be required to keep the paint viscosity within the desired range to meet the clients' specifications.

The U.S. EPA Region III approved the variance that the MDE accorded to Canam Steel Corporation.

Comparison of VOC Emissions

The 1996 average emission of the Lafayette, IN plant was 8.31 pounds of VOC per ton of steel coated. For the same year, the Point of Rocks, MD, plant emission was 14.70 pounds of VOC per ton of steel coated. The main difference between the two plants was that the process at the Maryland plant was subject to 3.5 pounds of VOC per gallon of coating content limit.

Applicability of New Source Review Requirements

Before the construction of the third dip tank (sometime between 1984 and 1987) the plant capacity was 32,000 tons of steel per year. The potential to emit (PTE) VOC prior to construction of the third dip tank (tank #2) was 240.0 tons per year. Therefore, the source was not a major source of VOC under the PSD program.

The capacity of the third dip tank is 24,000 tons of steel per year. The new PTE of the source is 420.0 tons of VOC per year since the construction of the third dip tank. The addition of the third dip tank did not increase the PTE VOC of the source by more than the VOC major source

threshold of 250.0 tons per year.

Conclusions

The proposed RACT will enable the source to control its emissions of VOC from dip coating processes. The new approach is a win/win situation because VOC emissions are controlled to a minimum level without increasing the costs of finished products. The proposed RACT is similar to the RACT recently approved for a similar source located in Maryland.

Limited Potential to Emit

The VOC content of the dip tank unit DTU will be limited to ≤ 3.9 pounds VOC per gallon of coating, less water, during the seven (7) month period comprising April 1 through October 31. The VOC content of the dip tank unit DTU will be limited to ≤ 4.3 pounds VOC per gallon of coating, less water, during the five (5) month period comprising November 1 through March 31.

Enforcement Issue

- (a) IDEM is aware that the coatings used in the dip tank unit (DTU) are not in compliance with 326 IAC 8-2-9 (Miscellaneous Metal Coating). The source is proposing a 326 IAC 8-1-5 RACT as an alternative method of compliance.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on August 25, 1998.

Justification for Modification

The Part 70 Operating permit has not been issued, therefore the RACT is being proposed through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 8-1-5. The RACT will be submitted as a state implementation plan (SIP) revision.

Conclusion

The RACT plan shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 157-16099-00035.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Canam Steel Corporation
Address City IN Zip: 2341 South 30th Street, Lafayette, Indiana 47905
Title V: T157-7454-00035
Reviewer: Amy Cook
Date: July 9, 2002

*NOTE: VOC limit fixed at 3.9 pounds per gallon delivered to the dip tanks (4.3 lb/gal during winter months)

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Lb VOC/gal solids	Transfer Efficiency
Primer/Thinner	10.9	35.60%	0.0%	35.6%	0.0%	41.00%	2.50000	20.000	3.87	3.87	193.49	4643.66	847.47	0.00	9.44	100%
																0%

State Potential Emissions	Add worst case coating to all solvents	193.49	4643.66	847.47	0.00
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METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Canam Steel Corporation
Address City IN Zip: 2341 South 30th Street, Lafayette, Indiana 47905
Title V: T157-7454-00035
Reviewer: Amy Cook
Date: July 9, 2002

*NOTE: VOC limit fixed at 3.9 pounds per gallon delivered to the dip tanks (4.3 lb/gal during winter months)

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Lb VOC/gal solids	Transfer Efficiency
Primer/Thinner	10.9	35.60%	0.0%	35.6%	0.0%	41.00%	2.50000	20.000	3.87	3.87	193.49	4643.66	847.47	0.00	9.44	100%
																0%

State Potential Emissions	Add worst case coating to all solvents	193.49	4643.66	847.47	0.00
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METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Canam Steel Corporation
Address City IN Zip: 2341 South 30th Street, Lafayette, Indiana 47905
Title V: T157-7454-00035
Reviewer: Amy Cook
Date: July 9, 2002

*NOTE: VOC limit fixed at 3.5 pounds per gallon delivered to the dip tanks

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Lb VOC/gal solids	Transfer Efficiency
Primer/Thinner	11.6	29.20%	0.0%	29.2%	0.0%	48.20%	4.25000	20.000	3.40	3.40	288.87	6932.88	1265.25	0.00	7.05	100%

State Potential Emissions	Add worst case coating to all solvents	288.87	6932.88	1265.25	0.00
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METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Canam Steel Corporation
Address City IN Zip: 2341 South 30th Street, Lafayette, Indiana 47905
Title V: T157-7454-00035
Reviewer: Amy Cook
Date: July 9, 2002

*NOTE: VOC limit fixed at 3.5 pounds per gallon delivered to the dip tanks

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Lb VOC/gal solids	Transfer Efficiency
Primer/Thinner	11.6	29.20%	0.0%	29.2%	0.0%	48.20%	4.25000	20.000	3.40	3.40	288.87	6932.88	1265.25	0.00	7.05	100%

State Potential Emissions	Add worst case coating to all solvents	288.87	6932.88	1265.25	0.00
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METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used